

Money Market Equilibrium

ECO 420 Lecture 4.1.

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Outline

- 1 Supply and Demand for Money
- 2 Money Market Equilibrium: A Graphical Analysis
- 3 Changes in the Money Market Equilibrium

The Liquidity Preference Framework

What is the liquidity preference framework?

Definition: The Liquidity Preference Framework (LPF)

LPF is a *model* of supply and demand for money developed by J.M.Keynes that predicts the equilibrium interest rate on the money market

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- Wealth consists of money and bonds only
- Money does not bring interest
- Interest rate on bonds is $i > 0$

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From equilibrium follows:

$$B_s + M_s = B_d + M_d \Leftrightarrow B_s - B_d = M_d - M_s$$

The Liquidity Preference Framework

What happens if the interest rate i rises?

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- bond prices go down

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- demand for bonds increases

The Liquidity Preference Framework

What happens if the interest rate i rises?

- bond prices go down
- expected return on bonds goes up
- demand for bonds increases
- demand for money decreases

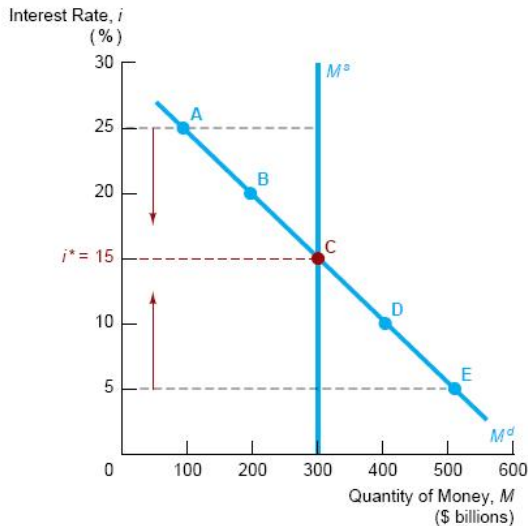
The Liquidity Preference Framework

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Opportunity cost explanation for the decline in money demand

The Liquidity Preference Framework: A Graphical Analysis



Changes in The Liquidity Preference Framework Equilibrium

Two main factors for change in demand for money:

Changes in The Liquidity Preference Framework Equilibrium

Two main factors for change in demand for money:

- wealth increases \Rightarrow money demand increases

Changes in The Liquidity Preference Framework Equilibrium

Two main factors for change in demand for money:

- wealth increases \Rightarrow money demand increases
- inflation increases \Rightarrow money demand increases

Changes in The Liquidity Preference Framework Equilibrium

Two main factors for change in demand for money:

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Any objections?

Differences Between the Asset Demand and LPF

The case of wealth and money demand

Asset Demand Framework

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Asset Demand Framework

- Wealth $\uparrow \Rightarrow$

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- Demand for bonds

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- Demand for bonds $\uparrow \Rightarrow$
- Price of bonds

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- Wealth $\uparrow \Rightarrow$
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- Price of bonds $\uparrow \Rightarrow$
- Interest rate

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LPF (Keynes)

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- Interest rate $\downarrow \Rightarrow$
- Bonds less attractive \Rightarrow

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- Interest rate $\downarrow \Rightarrow$
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- Demand for bonds $\downarrow \Rightarrow$
- Money demand \uparrow

The **Classic LPF** explanation:

Differences Between the Asset Demand and LPF

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- Interest rate $\downarrow \Rightarrow$
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- Money demand \uparrow

The **Classic LPF** explanation: Wealth $\uparrow \rightarrow$

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- Interest rate $\downarrow \Rightarrow$
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- Demand for bonds $\downarrow \Rightarrow$
- Money demand \uparrow

The **Classic LPF explanation**: Wealth $\uparrow \rightarrow$ people want to hold more money for the increased number of transactions $\uparrow \rightarrow$ money demand \uparrow .

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The case of inflation and money demand

Asset Demand Framework

- Inflation $\uparrow \Rightarrow$

Differences Between the Asset Demand and LPF

The case of inflation and money demand

Asset Demand Framework

- Inflation $\uparrow \Rightarrow$
- Exp.Ret. on Real Assets

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Differences Between the Asset Demand and LPF

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Asset Demand Framework

- Inflation $\uparrow \Rightarrow$
- Exp.Ret. on Real Assets $\uparrow \Rightarrow$
- Demand of bonds

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LPF (Keynes)

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The **Classic LPF explanation**: Inflation $\uparrow \rightarrow$

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The **Classic LPF explanation**: Inflation $\uparrow \rightarrow$ money are worth less \rightarrow

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The **Classic LPF explanation**: Inflation $\uparrow \rightarrow$ money are worth less \rightarrow people want to consume the same quantities of goods \rightarrow

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The **Classic LPF explanation**: Inflation $\uparrow \rightarrow$ money are worth less \rightarrow people want to consume the same quantities of goods \rightarrow nominal money demand \uparrow .

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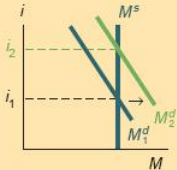
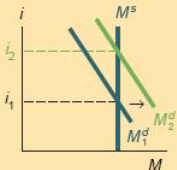
- Demand of bonds $\downarrow \Rightarrow$
- Money demand \uparrow

The **Classic LPF explanation**: Inflation $\uparrow \rightarrow$ money are worth less \rightarrow people want to consume the same quantities of goods \rightarrow nominal money demand \uparrow .

Which theory is the correct one?

Factors Shifting the Demand for Money

A summary

Variable	Change in Variable	Change in Money Demand (M^d) or Supply (M^s)	Change in Interest Rate	
Income	↑	$M^d \uparrow$	↑	
Price level	↑	$M^d \uparrow$	↑	

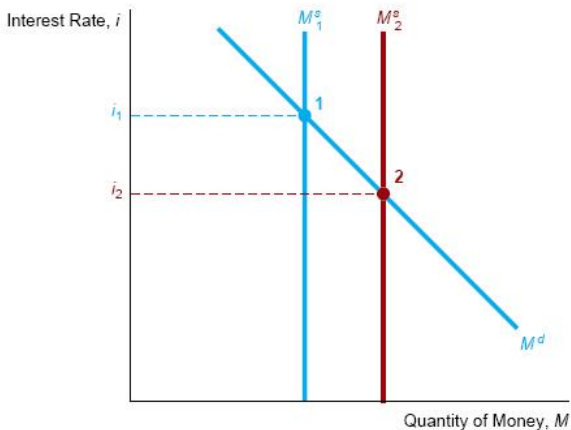
Factors Shifting the Supply of Money

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The Central Bank controls money supply

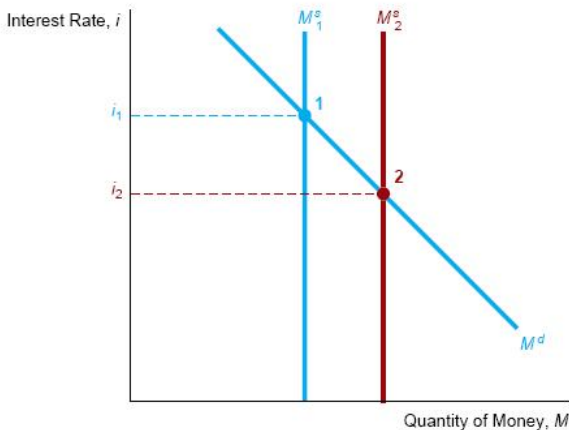
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Is that always the case?